UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III



Environmental Sciences Center 701 Mapes Road Fort Meade, Maryland 20755-5350

DATE:

February 24, 2012

SUBJECT:

Region III Data QA Review

FROM:

Colleen Walling

Region III ESAT RPO (3EA20)

TO:

Rich Fetzer

Remedial Project Manager (3HS31)

Attached is the organic data validation report for the Dimock Residential Groundwater site (DAS#33917; SDG#: 480-15770-1) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III EAID.

480-15570-1 my 5/7/12

If you have any questions regarding this review, please call me at (410) 305-2763.

Attachment

TO: #0042

TDF: #02096 Data Validation

TO: #0042

TDF: 02085 Sample Log-in Processing

cc: Gene Nance (Techlaw) Suddha Graves (Techlaw)

OFFICE OF ANALYTICAL SERVICES AND QUALITY ASSURANCE

Printed on 100% recycled/recyclable paper with 100% post-consumer fiber and process chlorine free.

Customer Service Hotline: 1-800-438-2474



Lockheed Martin IS&GS – Civil
Energy & Environment
ESAT Region 3
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597

Date:

February 22, 2012

Subject:

Organic Data Validation (M3 Level)

Case: R33917

Project: 480-15570-1

Site: Dimock

From:

Ex. 4 - CBI

Organic Data Reviewer

Ex. 4 - CBI

Senior Oversight Chemist

To:

Colleen Walling

ESAT Region 3 Project Officer

OVERVIEW

Third party Case R33917, Project 480-15570-1, consisted of twenty (20) aqueous samples including five (5) field blanks and one (1) rinsate blank analyzed for ethylene glycol, diethylene glycol, triethylene glycol, 2-methoxyethanol and 2-ethoxyethanol. Samples were analyzed by TestAmerica Buffalo (TAL BUF) according to Test Methods for Evaluating Solid Waste SW-846 Method 8015B.

SUMMARY

Data were validated according to Region 3 Modifications to the National Functional Guidelines for Organic Data Review, Level M3 and is assigned the Superfund Data Validation Label S4VM (Stage 4 Validation Manual). Areas of concern with respect to data usability are listed below.

MAJOR PROBLEM

Peaks were detected in the GC/FID Method 8015B glycols analysis within the retention time window of target compounds diethylene glycol and triethylene glycol. However, the positive identification of these target compounds was not confirmed via second GC column and/or GC/MS analysis. For this reason, the target compounds were qualified "R" on the Data Summary Forms (DSFs) as their absolute identity could not be proven.

MINOR PROBLEM

• The laboratory employed a four (4) point calibration curve for the analysis of the compounds requested; however, Method 8015B specifies the use of a five (5) point curve. No action was taken by the reviewer based on this deviation from the method.

NOTES

- Reported recoveries and Relative Percent Differences (RPDs) in Laboratory Control Sample (LCS) analyses and Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of samples HW02 and HW05 were within control limits.
- The calibration factors calculated by the reviewer were slightly different than those calculated by the laboratory. Results calculated using these calibration factors were within rounding errors from laboratory and data validation results.

ATTACHMENTS

Appendix A – Glossary of Data Qualifier Codes

Appendix B – Data Summary Form(s)

Appendix C – Chain of Custody Records

Appendix D - Laboratory Case Narrative

DCN: R33917_480-15570-1

Appendix A
Glossary of Data Qualifier Codes

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

- B = Not detected substantially above the level reported in laboratory or field blanks.
- R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.
- N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

- J = Analyte present. Reported value may not be accurate or precise.
- K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.
- UL = Not detected, quantitation limit is probably higher.

OTHER CODES

- NJ = Qualitative identification questionable due to poor resolution.

 Presumptively present at approximate quantity.
- Q = No analytical result.

Appendix B Data Summary Forms

Case #: R33917

Project: 480-15570-1

Site:

DIMOCK

Lab.:

TAL BUF

Number of Water Samples: 20

Sample Number:		HW02		EB01	Manage Property of the Party of	FB02	will the desired the second	FB03	***************************************	FB04	
Sampling Location:		HW02		EB01		FB02		FB03		FB04	
Laboratory ID:		480-15570-1	:	480-15570-2	480-15570-2			480-15570-4		480-15570-5	
Field QC:				Equipment B	Equipment Blank			Field Blank		Field Blank	
Matrix:		Water		Water		Water		Water		Water	
Units:		mg/L	mg/L r			mg/L		mg/L		mg/L	
Date Sampled:		01/25/2012	01/25/2012 0		01/28/2012		01/24/2012			01/26/2012	
Time Sampled:		12:58	12:58		11:26		12:11			09:13	,v
Dilution Factor:		1.0		1.0		1.0		1.0		1.0	
Volatile Compound	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Ethylene glycol	10						M. Marin	4			
Triethylene glycol	10	<u> </u>						1.7	R		
Diethylene glycol	10	0.64	R	0.55	R	0.53	R	0.56	R	0.59	R.
2-Methoxyethanol	10										
2-Ethoxyethanol	ĬÖ			ă i	100			Properties.			

Sample Number:		FB05		FB06		HW01		HW02z		HW04	
Sampling Location:	-	FB05		FB06 H		HW01		HW02z		HW04	₹
Laboratory ID:		480-15570-6		480-15570-7	480-15570-7			480-15570-9		480-15570-1	.0
Field QC:		Field Blank	Field Blank I		Field Blank						
Matrix:		Water	Water \		Water Wa			Water		Water	
Units:		mg/L	mg/L n			mg/L		mg/L		mg/L	
Date Sampled:		01/27/2012	01/27/2012 0		01/30/2012 01/25/2		5/2012 01/25/2012		01/24/2012		1
Time Sampled:		09:40	09:40		09:30		16:31			14:33	
Dilution Factor:		1.0		1.0		1.0		1.0		1.0	
Volatile Compound	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	2	Flag
Ethylene glycol	∦ 10 ^u	m.w.	**			M		A . 7			
Triethylene glycol	10										
Diethylene glycol	10		R.,	0.56	,R	0.56	R	0.54	R	0,52	R
2-Methoxyethanol	10									L	
2-Ethoxyethanol	10	11 11 12 A	7	half of		-7			Same.	il.	

RL = Reporting Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (RL * Dilution Factor)

Revised 09/99

Case #: R33917

Project: 480-15570-1

Site:

DIMOCK

Lab.:

TAL BUF

Sample Number:		HW05		HW06		HW08a		HW12		HW13	
Sampling Location:		HW05		HW06	HW06		HW08a			HW13	
Laboratory ID:		480-15570-1	1	480-15570-1	480-15570-12		480-15570-13		4	480-15570-1	5
					:		•				
Matrix:	Water		Water		Water		Water		Water		
Units:		mg/L	ng/L n			mg/L		mg/L		mg/L	
Date Sampled:		01/26/2012	01/26/2012 0		01/26/2012		01/25/2012			01/30/2012	
Time Sampled:			15:30		11:46		13:23		11:23		
Dilution Factor:		1.0		1.0		1.0		1.0		1.0	
Volatile Compound	RL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Ethylene glycol	10	EE.		I Wash		THE SE		Paper 396			
Triethylene glycol	10	2.2	R			3.0	R				
Diethylene glycol	10	0.68	R							0.57	_₹ R
2-Methoxyethanol	10										
2-Ethoxyethanol, 🔩	10	je.									

HW14	HW14-P	HW17	HW24	HW24-P
HW14	HW14	HW17	HW24	HW24
480-15570-16	480-15570-17	480-15570-18	480-15570-19	480-15570-20
Water	Water	Water	Water	Water
mg/L	mg/L	mg/L	mg/L	mg/L
01/26/2012	01/26/2012	01/27/2012	01/27/2012	01/27/2012
17:13	19:15	11:40	12:09	13:18
1.0	1.0	1.0	1.0	1.0
Result Flag	Result Flag	Result Flag	Result Flag	Result Flag
元 425人 市皇		15.65 M. 6.55	7. 669	17名 7·16 320
0.59 R	0:56 R	0,54 R	。 0.57 R	沙 0.56 R
	**			
	HW14 480-15570-16 Water mg/L 01/26/2012 17:13 1.0 Result Flag	HW14 480-15570-16 HW14 480-15570-17 480-15570-17 Water Water mg/L 01/26/2012 17:13 19:15 1.0 1.0 Result Flag Result Flag	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	HW14

RL = Reporting Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (RL * Dilution Factor)

Revised 09/99

Appendix C Chain of Custody Records

Page 1 of 3

USEPA CLP Generic COC (LAB COPY)

DateShipped: 1/31/2012 CarrierName: FedEx

CHAIN OF CUSTODY RECORD

No: 3-013112-075824-0031

Lab: Test America DIM

Lab Contact:

Lab Phone: 716.504.9822

Project Code: TL01-11-12-001 AirbillNo: 7980 0605 7668

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
HW02	Drinking Water/ Mike Ferrier	Grab	17GLY(7), 17GLY(7)	1220 (-NA- / 40miGlassVial), 2078 (-NA- / 40miGlassVial) (2)	HW02	01/25/2012 12:58	
EB01	Aqueous/ Tom Sedlacek	Grab	17GLY(7), 17GLY(7)	886 (-NA- / 40mlGlassVial), 887 (-NA- / 40mlGlassVial) (2)	EB01	01/28/2012 11:26	*
FB02	Aqueous/ Tom Sedlacek	Grab	17GLY(7), 17GLY(7)	1355 (-NA- / 40miGlassVial), 1356 (-NA- / 40miGlassVial) (2)	FB02	01/24/2012 12:11	
F803	Aqueous/ Jael Munson	Grab	17GLY(7), 17GLY(7)	1357 (-NA- / 40miGlassVial), 1358 (-NA- / 40miGlassVial) (2)	FB03	01/25/2012 10:01	
FB04	Aqueous/ Joel Munson	Greb	17GLY(7), 17GLY(7)	1375 (-NA- / 40mlGlassVial), 1376 (-NA- / 40mlGlassVial) (2)	FB04	01/26/2012 09:13	77. 1
FB05	Aqueous/ Joel Munson	Grab	17GLY(7), 17GLY(7)	1387 (-NA- / 40miGlassVial), 1388 (-NA- / 40miGlassVial) (2)	FB05	01/27/2012 09:40	
FB06	Aqueous/ Dan Jacobsen	Grab	17GLY(7), 17GLY(7)	1132 (-NA- / 40miGlassVial), 1133 (-NA- / 40miGlassVial) (2)	FB06	01/30/2012 09:30	
HW01	Drinking Water/ Bryan Berna	Grab	17GLY(7), 17GLY(7)	1369 (-NA- / 40mlGlassVial), 1370 (-NA- / 40mlGlassVial) (2)	HW01	01/25/2012 16:31	

Shipment for Case Complete? N Special Instructions: Samples Transferred From Chain of Custody # Analysis Key: 17GLY=17-Glycol

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
No	/ Sleuden	0/3/12	Colle	2-18	2 730		•		2		
-i. A:	,	- 1 - 0	\mathcal{F}^{\cdot}			*.*		· · · · · · · · · · · · · · · · · · ·			
		į.	Y. x	. :							

Page 183 of 186

02/21/2012

DIM0200236

Page 2 of 3

USEPA CLP Generic COC (LAB COPY)

DateShipped: 1/31/2012 CarrierName: FedEx AirbillNo: 7980 0605 7668

CHAIN OF CUSTODY RECORD

Project Code: TL01-11-12-001

No: 3-013112-075824-0031

Lab: Test America DIM Lab Contact: Lab Phone: 716.504.9822

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
HW02z	Drinking Water/ Mike Ferrier	Grab	17GLY(7), 17GLY(7)	1366 (-NA- / 40mlGlassVial), 1367 (-NA- / 40mlGlassVial) (2)	HW02z	01/25/2012 12:59	
HW04	Drinking Water/ Mike Ferner	Grab	17GLY(7)	2095 (-NA- / 40mlGlassVial) (1)	HW04	01/24/2012 14:33	
HW05	Drinking Water/ Tom Sedlacek	Grab	17GLY(7), 17GLY(7)	1377 (-NA- / 40mlGlassVial), 1378 (-NA- / 40mlGlassVial) (2)	HW05	01/26/2012 11:35	
HW06	Drinking Water/ Bryan Berna	Grab	17GLY(7), 17GLY(7)	1379 (-NA- / 40mlGlassVial), 1380 (-NA- / 40mlGlassVial) (2)	HW06	01/26/2012 15:30	
HW08a	Drinking Water/ Bryan Berna	Grab	17GLY(7)	1363 (-NA- / 40m/GlassVial) (1)	HW08a	01/25/2012 11:46	
HW12	Drinking Water/ Mike Ferrier	Grab	17GLY(7), 17GLY(7)	1372 (-NA- / 40mlGlassVial), 1373 (-NA- / 40mlGlassVial) (2)	HW12	01/26/2012 13:23	
HW13	Drinking Water/ Bryan Berna	Grab	17GLY(7), 17GLY(7)	1168 (-NA- / 40mlGlassVial), 1169 (-NA- / 40mlGlassVial) (2)	HW13	01/30/2012 11:23	
HW14	Drinking Water/ Mike Ferrier	Grab	17GLY(7), 17GLY(7)	1381 (-NA- / 40mlGlassVial), 1382 (-NA- / 40mlGlassVial) (2)	HW14	01/26/2012 17:13	

		Shipment for Case Complete? N
Special Instructions:		Samples Transferred From Chain of Custody #
Analysis Key: 17GLY=17-Glycol		

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
14	fallewllin	01/31/12	Colle	24-12	73)			-			
		/									
			`				-11.51				

Page 184 of 186

02/21/2012

DIM0200236

Page 3 of 3

USEPA CLP Generic COC (LAB COPY)

DateShipped: 1/31/2012 CarrierName: FedEx AirbillNo: 7980 0605 7668

CHAIN OF CUSTODY RECORD

No: 3-013112-075824-0031

Lab: Test America DIM Lab Contact: Lab Phone: 716.504.9822

Project Code: TL01-11-12-001

Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	For Lab Use Only
HW14-P	Drinking Water/ Mike Ferrier	Grab	17GLY(7), 17GLY(7)	1384 (-NA- / 40miGlassVial), 1385 (-NA- / 40miGlassVial) (2)	HW14	01/26/2012 19:15	
HW17	Drinking Water/ Bryan Berna	Grab	17GLY(7), 17GLY(7)	1389 (-NA- / 40miGlassVial), 1390 (-NA- / 40miGlassVial) (2)	HW17	01/27/2012 11:40	
HW24	Drinking Water/ Mike Ferrier	Grab	17GLY(7), 17GLY(7)	1391 (-NA- / 40mlGlassVial), 1392 (-NA- / 40mlGlassVial) (2)	HW24	01/27/2012 12:09	
HW24-P	Drinking Water/ Mike Ferrier	Grab	17GLY(7)	1395 (-NA- / 40mlGlassVial) (1)	HW24	01/27/2012 13:18	
			50		77.42	 	1
						*	
				:			
			TV TV				
				:			

	Shipment for Case Complete? N
Special Instructions:	Samples Transferred From Chain of Custody #
Analysis Key: 17GLY=17-Glycol	

Items/Reason	Relinquished by	Date	Required by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date -	Time
1	Jellewllin	0131112	Calluns	1-12	730						
			1)								
			· · · · · · · · · · · · · · · · · · ·				.9		William P. Commission of the C		

Page 185 of 186

02/21/2012

DIM0200236



ANALYTICAL REPORT

Job Number: 480-15570-1

Job Description: TechLaw Project No. R33917

For:

Techlaw, Inc 2208 Warwood Ave. Wheeling, WV 26003-6546

Attention: Mr. Gene Nance

Approved for ralease Brian Fischer Project Manager II 2/21/2012 10:20 AM

Brian Fischer
Project Manager II
brian.fischer@testamericainc.com
02/21/2012

The test results in this report meet all NELAP requirements for analytes for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the TestAmerica Project Manager who has signed this report.

TestAmerica Buffalo NELAC Certifications: CADPH 01169CA, FLDOH E87672, ILEPA 200003, KSDOH E-10187, LADEQ 30708, MDH 036-999-337, NHELAP 2973, NJDEP NY455, NHDOH 10026, ORELAP NY200003, PADEP 68-00281, TXCEQ T-104704412-10-1

TestAmerica Laboratories, Inc.

TestAmerica Buffalo 10 Hazelwood Drive, Amherst, NY 14228-2298 Tel (716) 691-2600 Fax (716) 691-7991 www.testamericainc.com



02/21/2012

Job Narrative 480-15570-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC VOA

Method 8015B: The percent difference in the associated continuing calibration verification (CCV 480-50111/36) for several analytes exceeded 20% on the ZB-5 column, indicating a high bias. The associated samples are non-detect for these analytes, the data is unaffected.

No other analytical or quality issues were noted.

02/21/2012

SAMPLE SUMMARY

Client: Techlaw, Inc.

Job Number: 480-15570-1

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
480-15570-1	HW02	Water	01/25/2012 1258	02/01/2012 0730
480-15570-2	EB01	Water	01/28/2012 1126	02/01/2012 0730
480-15570-3	FB02	Water	01/24/2012 1211	02/01/2012 0730
480-15570-4	FB03	Water	01/25/2012 1001	02/01/2012 0730
480-15570-5	FB04	Water	01/26/2012 0913	02/01/2012 0730
480-15570-6	FB05	Water	01/27/2012 0940	02/01/2012 0730
480-15570-7	FB06	Water	01/30/2012 0930	02/01/2012 0730
480-15570-8	HW01	Water	01/25/2012 1631	02/01/2012 0730
480-15570-9	HW02Z	Water	01/25/2012 1259	02/01/2012 0730
480-15570-10	HW04	Water	01/24/2012 1433	02/01/2012 0730
480-15570-11	HW05	Water	01/26/2012 1135	02/01/2012 0730
480-15570-12	HW06	Water	01/26/2012 1530	02/01/2012 0730
480-15570-13	HW08A	Water	01/25/2012 1146	02/01/2012 0730
480-15570-14	HW12	Water	01/26/2012 1323	02/01/2012 0730
480-15570-15	HW13	Water	01/30/2012 1123	02/01/2012 0730
480-15570-16	HW14	Water	01/26/2012 1713	02/01/2012 0730
480-15570-17	HW14-P	Water	01/26/2012 1915	02/01/2012 0730
480-15570-18	HW17	Water	01/27/2012 1140	02/01/2012 0730
480-15570-19	HW24	Water	01/27/2012 1209	02/01/2012 0730
480-15570-20	HW24-P	Water	01/27/2012 1318	02/01/2012 0730

METHOD SUMMARY

Client: Techlaw, Inc.

Job Number: 480-15570-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Glycols -Direct Injection (GC/FID)	TAL BUF	SW846 8015B	
8015 Direct Injection Prep (Aqueous)			SW846 8015 Prep

Lab References:

TAL BUF = TestAmerica Buffalo

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Login Sample Receipt Checklist

Client: Techlaw, Inc.

Job Number: 480-15570-1

List Source: TestAmerica Buffalo

Login Number: 15570

List Number: 1 Creator: May, Joel M

Question	Answer	Comment		
Radioactivity either was not measured or, if measured, is at or below background	True			
The cooler's custody seal, if present, is intact.	True			
The cooler or samples do not appear to have been compromised or tampered with.	True			
Samples were received on ice.	True			
Cooler Temperature is acceptable.	True			
Cooler Temperature is recorded.	True			
COC is present.	True			76
COC is filled out in ink and legible.	True			N.
COC is filled out with all pertinent information.	True			
Is the Field Sampler's name present on COC?	True			
There are no discrepancies between the sample IDs on the containers and the COC.	True		# 	
Samples are received within Holding Time.	True		Á.	
Sample containers have legible labels.	True			
Containers are not broken or leaking.	True			
Sample collection date/times are provided.	True			
Appropriate sample containers are used.	True			
Sample bottles are completely filled.	True			
Sample Preservation Verified	True			
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True			#F1
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True			
If necessary, staff have been informed of any short hold time or quick TAT needs	True			
Multiphasic samples are not present.	True			
Samples do not require splitting or compositing.	True			
Sampling Company provided.	True			
Samples received within 48 hours of sampling.	True			
Samples requiring field filtration have been filtered in the field.	N/A			
Chlorine Residual checked.	N/A			



RE: TechLaw Project No. R33917

Fischer, Brian

to:

Fred Foreman

02/23/2012 11:19 AM

Cc:

"Nance, Gene"

Hide Details

From: "Fischer, Brian" < Brian. Fischer@testamericainc.com>

To: Fred Foreman/ESC/R3/USEPA/US@EPA

Cc: "Nance, Gene" < Gnance@TechLawInc.com>

History: This message has been replied to.

Hi Fred,

This 8015 glycol modified method is single column analysis, there is no secondary column.

Announcing TotalAccess 4.0 – Online access to your data. New homepage with easier access to your data, multiple search criteria including sampling date and much more! Contact your Account Executive or Project Manager today to arrange for a live demonstration!

BRIAN FISCHER

Project Management Supervisor

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

10 Hazelwood Drive Amherst, NY 14228 Tel 716.504.9835 www.testamericainc.com

The state of the s

From: Fred Foreman [mailto:Foreman.Fred@epamail.epa.gov]

file://C-\Documents and Sattings\fforemon\t coal Sattings\Tomalanta-DA & 426\ ---1.1(10 0.00.0010

Sent: Thursday, February 23, 2012 10:47 AM

To: Fischer, Brian Cc: Mr. Gene Nance

Subject: TechLaw Project No. R33917

Brian,

In reviewing the results from cases 15814, 15770, 15712 and 15814, there are several low level hits (below RL but above MDL) of triethlyene gylcol and diethylene gylcol. We need to know if these positive identifications were confirmed on a secondary column as this confirmation information was missing in the package we received.

Your immediate attention to this issue is greatly appreciated.

Fred Foreman, Chief
Technical Services Branch
Office of Analytical Services & Quality Assurance
US EPA Region III
Ft. Meade, Maryland
410-305-2629

Appendix A Form Is

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	X227
Client Sample ID: HW02	Lab Sample ID: 480-15570-1
Matrix: Water	Lab File ID: PE08229.d
Analysis Method: 8015B	Date Collected: 01/25/2012 12:58
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 10:42
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.64	J	10	0.51
109-86-4	2-Methoxyethanol	ND	enggenenny (1935), binnen' i wang ng, (1935)	10	0.76
110-80-5	2-Ethoxyethanol	ND	tenan an en un un un un en	10	0.94

ngammay/hagyon ydenesseng yessensensiyd. queneyy r. 4944-98898897 (Pr	(*) 			
CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	106		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.;	
Client Sample ID: EB01	Lab Sample ID: 480-15570-2
Matrix: Water	Lab File ID: PE08230.d
Analysis Method: 8015B	Date Collected: 01/28/2012 11:26
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 11:00
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25 (mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.55	J	10	0.51
109-86-4	2-Methoxyethanol	ND	,	10	0.76
110-80-5	2-Ethoxyethanol	ND		1.0	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	106		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: FB02	Lab Sample ID: 480-15570-3
Matrix: Water	Lab File ID: PE08231.d
Analysis Method: 8015B	Date Collected: 01/24/2012 12:11
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 11:17
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L
	· · · · · · · · · · · · · · · · · · ·

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND	Maringarek perili	10	1.6
111-46-6	Diethylene glycol	0.53	J	10	0.51
109-86-4	2-Methoxyethanol	ND	**************************************	10	0.76
110-80-5	2-Ethoxyethanol	ND		10	0.94

CAS NO.	SURROGATE	*REC	Q	LIMITS
110-63-4	1,4-Butanediol	103		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	•
Client Sample ID: FB03	Lab Sample ID: 480-15570-4
Matrix: Water	Lab File ID: PE08233.d
Analysis Method: 8015B	Date Collected: 01/25/2012 10:01
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 12:08
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL,	MDL
107-21-1	Ethylene glycol	. ND		10	0.76
112-27-6	Triethylene Glycol	1.7	J	10	1.6
111-46-6	Diethylene glycol	0.56	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol .	ND		10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	104		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: FB04	Lab Sample ID: 480-15570-5
Matrix: Water	Lab File ID: PE08234.d
Analysis Method: 8015B	Date Collected: 01/26/2012 09:13
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 12:25
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.59	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND		10.	0.94

	CAS NO.	SURROGATE	%REC	Q	LIMITS
F	110-63-4	1,4-Butanediol	106		66-130

Lab Name: T	estAmerica Buffalo	Job No.: 480-15570-1					
SDG No.:							
Client Sampl	e ID: FB05	Lab Sample ID: 480-15570-6					
Matrix: Water		Lab File ID: PE08235.d					
Analysis Met	hod: 8015B	Date Collected: 01/27/2012 09:40					
Sample wt/vo	l: 0.5(mL)	Date Analyzed: 02/02/2012 12:43					
Soil Aliquot	Vol:	Dilution Factor: 1					
Soil Extract Vol.:		GC Column: ZB-5 . ID: 0.25(mm)					
% Moisture:		Level: (low/med) Low					
Analysis Bat	ch No.: 50111	Units: mg/L					
CAS NO.	COMPOUND NAME	RESULT Q RL MDL					
107-21-1	Ethylene glycol	ND 10 0.7					
112-27-6	Triethylene Glycol	ND 10 1.					
111-46-6	Diethylene glycol	0.56 J 10 0.5					
109-86-4	2-Methoxyethanol	ND 10 0.7					
110-80-5	2-Ethoxyethanol	ND 10 0.9					

					. با پیرنشدو شد . وه دوم
CAS	NO.	SURROGATE	%REC	Q	LIMITS
110-6	3-4 1.4-But	anediol	108		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: FB06	Lab Sample ID: 480-15570-7
Matrix: Water	Lab File ID: PE08236.d
Analysis Method: 8015B	Date Collected: 01/30/2012 09:30
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 13:00
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.56	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND		10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	105		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	ver the second s
Client Sample ID: HW01	Lab Sample ID: 480-15570-8
Matrix: Water	Lab File ID: PE08237.d
Analysis Method: 8015B	Date Collected: 01/25/2012 16:31
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 13:17
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q.	RL.	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.56	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND	manyar apari inga manan ang	10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	103		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: <u>HW02Z</u>	Lab Sample ID: 480-15570-9
Matrix: Water	Lab File ID: PE08238.d
Analysis Method: 8015B	Date Collected: 01/25/2012 12:59
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 13:35
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND	lermineria recensor-merenduarum phinds lerpida.	10	1.6
111-46-6	Diethylene glycol	0.54	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND		10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	100	<u> </u>	66-130

Lab Name: 1	CestAmerica Buffalo	Job No.: 480-15570-	1	
SDG No.:				
Client Samp	le ID: HW04	Lab Sample ID: 480-	15570-10	
Matrix: Wat	er	Lab File ID: PE0823	19.d	
Analysis Met	thod: 8015B	Date Collected: 01/	/24/2012 14:33	
Sample wt/vo	ol: 0.5(mL)	Date Analyzed: 02/0	2/2012 13:52	Merce . Voc voca de respectationalement de la des sesses page
Soil Aliquot	t Vol:	Dilution Factor: 1		Annual Committee of the
Soil Extract	vol.;	GC Column: ZB-5	ID: 0.	25 (mm)
% Moisture:		Level: (low/med) Lo)W	**
Analysis Bat	ch No.: 50111	Units: mg/L	elements to control elements and discontrol elements of the control elements o	marke New Colonial Colonia Col
			the control of the co	
CAS NO.	COMPOUND NAME	RESULT Q	RL	MDL
107-21-1	Ethylene glycol	ND	10	0.76
112-27-6	Triethylene Glycol	ND	10	1.6
111-46-6	Diethylene glycol .	0.52 J	10	0.51
109-86-4	2-Methoxyethanol	ND	10	0.76
110-80-5	2-Ethoxyethanol		10	0.94
jalan di sanggan panggan pangg	`a			onnomentionementipopija pija pijateta (de laudanom iina kiila leest

SURROGATE

%REC

99

CAS NO.

1,4-Butanediol

110-63-4

LIMITS

66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: HW05	Lab Sample ID: 480-15570-11
Matrix: Water	Lab File ID: PE08247.d
Analysis Method: 8015B	Date Collected: 01/26/2012 11:35
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 16:44
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q.	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	2.2	J	10	1.6
111-46-6	Diethylene glycol	0.68	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND		10	0.94

process solds per date in reconstitution of	and the second section of the contract of the	personan		grand and the same of the same
CAS NO.	SURROGATE	%REC	Q	LIMITS
			Market Strategy of the Control of th	Linguistan
110-63-4	1,4-Butanediol	102		66-130

Lab Name: T	estAmerica Buffalo	Job No.: 480-15570-1	
SDG No.:			43 - 11
Client Sampl	e ID: HW06	Lab Sample ID: 480-15570-12	
Matrix: Wat	er	Lab File ID: PE08248.d	
Analysis Met	hod: 8015B	Date Collected: 01/26/2012 15:	30
Sample wt/vo	ol: 0.5(mL)	Date Analyzed: 02/02/2012 17:0	12
Soil Aliquot	: Vol;	Dilution Factor: 1	
Soil Extract	Vol.:	GC Column: ZB-5 ID:	0.25 (mm)
% Moisture:	_	Level: (low/med) Low	
Analysis Bat	ch No.: 50111	Units: mg/L	
CAS NO.	COMPOUND NAME	RESULT Q RL	MDL
107-21-1	Ethylene glycol	ND ND	0.76
112-27-6	Triethylene Glycol	ND· 1	1.6
111-46-6	Diethylene glycol	ND 1	0.51
109-86-4	2-Methoxyethanol	ND 1	0.76
110-80-5	2-Ethoxyethanol	ND	0.94

A			-		ŀ
CAS NO.	SURROGATE	%REC	Q	LIMITS	Company of
110-63-4	1,4-Butanediol	105		66-130	

Lab Name: TestAmerica Buffalo Job No.: 480-15570-1 SDG No.: Client Sample ID: HW08A Lab Sample ID: 480-15570-13 Lab File ID: PE08250.d Matrix: Water Date Collected: 01/25/2012 11:46 Analysis Method: 8015B Sample wt/vol: 0.5(mL) Date Analyzed: 02/02/2012 17:36 Dilution Factor: 1 Soil Aliquot Vol: GC Column: ZB-5 ID: 0.25(mm) Soil Extract Vol.: Level: (low/med) Low % Moisture: Analysis Batch No.: 50111 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	NO	The state of the s	10	0.76
112-27-6	Triethylene Glycol	3.0	J	10	1.6
111-46-6	Diethylene glycol	ND		10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND		10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	101		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: HW12	Lab Sample ID: 480-15570-14
Matrix: Water	Lab File ID: PE08251.d
Analysis Method: 8015B	Date Collected: 01/26/2012 13:23
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 17:53
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	,ND		1.0	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	ND		10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND		10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	100		66-130

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: HW13	Lab Sample ID: 480-15570-15
Matrix: Water	Lab File ID: PE08252.d
Analysis Method: 8015B	Date Collected: 01/30/2012 11:23
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 18:11
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.57	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0,76
110-80-5	2-Ethôxyethanol	ND	-	10	0.94

CAS NO.	SURROGATE	*REC	Q	LIMITS	-
110-63-4	1,4-Butanediol	100	***************************************	66-130	

Lab Name: TestAmerica Buffalo Job No.: 480-15570-1 SDG No.: Lab Sample ID: 480-15570-16 Client Sample ID: HW14 Lab File ID: PE08253.d Matrix: Water Analysis Method: 8015B Date Collected: 01/26/2012 17:13 Sample wt/vol: 0.5(mL) Date Analyzed: 02/02/2012 18:28 Soil Aliquot Vol: Dilution Factor: 1 GC Column: ZB-5 ID: 0.25(mm) Soil Extract Vol.: Level: (low/med) Low % Moisture: Analysis Batch No.: 50111 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.59	J	10	0.51
109-86-4	2-Methoxyethanol	ND	*	10	0.76
110-80-5	2-Ethoxyethanol	ND	÷	10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	103	American American American States (Section 1997)	66-130

Lab Name: TestAmerica Buffalo .	Job. No.: 480-15570-1
SDG No.:	
Client Sample ID: HW14-P	Lab Sample ID: 480-15570-17
Matrix: Water	Lab File ID: PE08254.d
Analysis Method: 8015B	Date Collected: 01/26/2012 19:15
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 18:45
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Ó	RL	MDL
107-21-1	Ethylene glycol	ND	***************************************	10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.56	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND		10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	102		66-130

Lab Name: T	estAmerica Buffalo	Job No.: 480-1	5570-1		
SDG No.:					
Client Sampl	e ID: HW17	Lab Sample ID:	480-15570	-18	
Matrix: Wat	er	Lab File ID: F	E08255.d		
Analysis Met	hod: 8015B	Date Collected:	01/27/20	12 11:40	
Sample wt/vo	1: 0.5 (mL)	Date Analyzed:	02/02/201	2 19:03	
Soil Aliquot	. Vol:	Dilution Factor	·: 1		
Soil Extract	Vol.:	GC Column: ZB-	-5.	ID: 0	.25 (mm)
% Moisture:		Level: (low/med	i) Low		
Analysis Bat	ch No.: 50111	Units: mg/L		бу тетура, утальтай ттуру Манабу, рет с. i mahih pi katiya,	
CAS NO.	COMPOUND NAME	RESULT	PQ.	RL	MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.54	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol :	ND		10	0.94
CAS NO.	SURROGATE		%REC	Q	LIMITS
110 60 4	T 7 7 7 70 70 70 70 70 70 70 70 70 70 70		1.00		CC 120

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: HW24	Lab Sample ID: 480-15570-19
Matrix: Water	Lab File ID: PE08256.d
Analysis Method: 8015B	Date Collected: 01/27/2012 12:09
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 19:20
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L
CAS NO. COMPOUND NAME	RESULT Q RL MDL

CAS NO.	COMPOUND NAME	ME RESULT			MDL
107-21-1	Ethylene glycol	ND		10	0.76
112-27-6	Triethylene Glycol	ND		10	1.6
111-46-6	Diethylene glycol	0.57	J	10	0.51
109-86-4	2-Methoxyethanol	ND		10	0.76
110-80-5	2-Ethoxyethanol	ND:		10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS	
110-63-4	1,4-Butanediol	99		66-130	

Lab Name:	TestAmerica Buffalo	Job No.: 4	80-1	5570-1	*	
SDG No.:						
Client Samp	le ID: HW24-P	Lab Sample	ID:	480-15570	-20	
Matrix: Wat	ier	Lab File ID	: P	E08257.d		
Analysis Me	thod: 8015B	Date Collec	ted:	01/27/20	12 13:18	}
Sample wt/vo	ol: 0.5(mL)	Date Analyz	ed:	02/02/201	2 19:37	
Soil Aliquot	t Vol:	Dilution Fa	ctor	: 1	100 m	The Management of the Control of the
Soil Extract	t Vol.:	GC Column:	ZB-	5	ID: ().25(mm)
% Moisture:		Level: (low	/med) Low		ментом), III (944) (166) , убраниченнями, ученичення устобороді
Analysis Ba	tch No.: 50111	Units: mg/I	<u>.</u>		· · · · · · · · · · · · · · · · · · ·	
CAS NO.	COMPOUND NAME	RESUL	T	Q	RL	MDL
107-21-1	Ethylene glycol		ND	<u> </u>	10	0.76
112-27-6	Triethylene Glycol		ND		10	1.6
111-46-6	Diethylene glycol	0	.56	J	10	0.51
109-86-4	2-Methoxyethanol	annellinerikannonnuttin anneri	ND		10	0.76
110-80-5	2-Ethoxyethanol		ND		10	0.94
CAS NO.	SURROGATE		umräniklammunun-nam	*REC	Q	LIMITS
110-63-4	1.4-Butanediol	~ · · · · · · · · · · · · · · · · · · ·		101	T	66-130

Appendix B Support Documentation

DIM0200236 DIM0200276

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Instrument ID: PE-01	Start Date: 02/01/2012 10:57
Analysis Batch Number: 49964	End Date: 02/01/2012 19:02

LAB SAMPLE ID	MPLE ID CLIENT SAMPLE ID DATE ANALYZE		DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ	ale kan akin mananan m Mananan mananan	02/01/2012 10:57	1	in a second seco	ZB-5 0.25(mm)
STD 480-49964/5 IC	iak lakaniganiganiyangan migay yir mayic iga ya mananan mananan mananan mahini 19-18 yil iyi 19-19 (19-18)	02/01/2012 11:15	1	PE08205.d	ZB-5 0.25(mm)
STD 480-49964/6 IC	**************************************	02/01/2012 11:32	1	PE08206.d	ZB-5 0.25(mm)
STD 480-49964/7 IC		02/01/2012 11:49	1	PE08207.d	ZB-5 0.25(mm)
STD 480-49964/8 IC		02/01/2012 12:06	1	PE08208.d	ZB-5 0.25(mm)
ICV 480-49964/9		02/01/2012 12:24	1	Мерерургарунарунарун негининге (Минеринин на маничник на наменину интеграционарунарунарунарунарунарунарунарун	ZB-5 0.25(mm)
ZZZZZ	www.pinishamanian	02/01/2012 13:43	1		ZB-5 0.25(mm)
ZZZZZ	10 20	02/01/2012 14:11	1	and the second second section of the second	ZB-5 0.25(mm)
ICV 480-49964/12	***	02/01/2012 14:48	1		ZB-5 0.25(mm)
CCV 480-49964/13	idilikilan yana ahasanin kananan kanan	02/01/2012 15:52	1	anne anne anne anne anne anne anne anne	ZB-5 0.25(mm)
ZZZZZ	ii. aas as an anderson aan aan an	02/01/2012 16:09	1	**************************************	ZB-5 0.25 (mm)
ZZZZZ		02/01/2012 16:26	1	maannannanpiyraanniganpaannannannannan	ZB-5 0.25(mm)
22222	ду динанишца) дианачино	02/01/2012 16:44	1		ZB-5 0.25(mm)
22222		02/01/2012 17:01	i	e ekomen numunan uniskanden akaman amaman ana enandelurin mengundunun	ZB-5 0.25(mm)
MDLV 480-49832/5-A		02/01/2012 17:18	1		ZB-5 0.25(mm)
MDLV 480-49832/6-A		02/01/2012 17:36	1		ZB-5 0.25(mm)
22222		02/01/2012 17:53	50		ZB-5 0.25(mm)
CCV 480-49964/24	neines y	02/01/2012 19:02	1		ZB-5 0.25 (mm)

8015B

FORM VI GC VOA INITIAL CALIBRATION DATA EXTERNAL STANDARD CURVE EVALUATION

Lab Name:	TestAmerica Buf	falo	Job No.: 480-15570-1	**	Analy Batch No.: 49964
SDG No.:					
Instrument	ID: PE-01		GC Column: ZB-5	ID; 0.25(mm)	Heated Purge: (Y/N) N
Calibration	n Start Date:	02/01/2012 10:57	Calibration End Date:	02/01/2012 12:06	Calibration ID: 5852
Calibration F	Files:				
LEVEL:	LAB SAMPLE ID:	LAB FILE ID:	When the hand a state of the same of the s		•
Level 1	STD 480-49964/5	PE08205.d			
Level 2	STD 480-49964/6	PE08206.d			
Level 3	STD 480-49964/7	PE08207.d			
Level 4	STD 480-49964/8	PE08208.d			

	CF.		CURVE COEFFICIENT #			1 - 1									
LVL 1	LVL 2	LVL 3	LVL 4	TYPE	В	M1	M2					*RSD	OR COD		OR COD
563452	596737	595761	513714	Ave		571859.509		П		6.2		20.0			
751570	792686	787469	694526	Ave		760510.780				5.3		20.0	-		
617951	671784	682739	601502	Ave		643217.933				5.4		20.0			
459250	498692	513964	454783	Ave		480568.287				5.3		20.0			
548106	538716	560304	500903	Ave		540870.511				4.4		20.0			
362706	305218	329041	307007	Ave		350933.990				17.0		20.0			
913252	977122	967058	853325	Ave	***************************************	917742.130				5.9		20.0			
	563452 751570 617951 459250 548106 362706	563452 596737 751570 792686 617951 671784 459250 498692 548106 538716 362706 305218	563452 596737 595761 751570 792686 787469 617951 671784 682739 459250 498692 513964 548106 538716 556304 362706 305218 329041	563452 596737 595761 513714 751570 792686 787469 694526 617951 671784 682739 601502 459250 498692 513964 454783 548106 538716 560304 500903 362706 305218 329041 307007	LVL 1 LVL 2 LVL 3 LVL 4 TYPE 563452 596737 595761 513714 Ave . 751570 792686 787469 694526 Ave 617951 671784 682739 601502 Ave 459250 498692 513964 454783 Ave 548106 538716 560304 509903 Ave 362706 305218 329041 307007 Ave	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B 563452 596737 595761 513714 Ave .751570 792686 787469 694526 Ave 617951 671784 682739 601502 Ave 459250 498692 513964 454783 Ave 548106 538716 560304 509903 Ave 362706 305218 329041 307007 Ave	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 563452 596737 595761 513714 Ave 571859.509 751570 792686 787469 694526 Ave 760510.780 617951 671784 682739 601502 Ave 643217.933 459250 498692 513964 454783 Ave 480568.287 548106 538716 560304 500903 Ave 540870.511 362706 305218 329041 307007 Ave 350933.990	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 M2 563452 596737 595761 513714 Ave 571859.509 751570 792686 787469 694526 Ave 760510.780 617951 671784 682739 601502 Ave 643217.933 459250 498692 513964 454783 Ave 480568.287 548106 538716 560304 500903 Ave 540870.511 362706 305218 329041 307007 Ave 350933.990	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 M2 563452 596737 595761 513714 Ave 571859.509 751570 792686 787469 694526 Ave 760510.780 617951 671784 682739 601502 Ave 643217.933 459250 498692 533964 454783 Ave 480568.287 548106 538716 560304 500903 Ave 540870.511 362706 305218 329041 307007 Ave 350933.990	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 M2 563452 596737 595761 513714 Ave 571859.509 751570 792686 787469 694526 Ave 760510.780 617951 671784 682739 601502 Ave 643217.933 459250 498692 513964 454783 Ave 480568.287 548106 538716 560304 509093 Ave 540870.511 362706 305218 329041 307007 Ave 350933.990	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 M2 563452 596737 595761 513714 Ave 571859.509 6.2 751570 792686 787469 694526 Ave 760510.780 5.3 617951 671784 682739 601502 Ave 643217.933 5.4 459250 498692 513964 454783 Ave 480568.287 5.3 548106 538716 560309 50993 Ave 540870.511 4.4 362706 305218 329041 307007 Ave 350933.990 17.0	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 M2 563452 596737 595761 513714 Ave 571859.509 6.2 751570 792686 787469 694526 Ave 760510.780 5.3 617951 671784 682739 601502 Ave 643217.933 5.4 459250 498692 513964 454783 Ave 480568.287 5.3 548106 538716 560309 509903 Ave 540870.511 4.4 362706 305218 329041 307007 Ave 350933.990 17.0	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 M2 \$RSD 563452 596737 595761 513714 Ave 571859.509 6.2 20.0 751570 792686 787469 694526 Ave 760510.780 5.3 20.0 617951 671784 682739 601502 Ave 643217.933 5.4 20.0 458250 498692 513964 454783 Ave 480568.287 5.3 20.0 548106 538716 560300 500903 Ave 540870.511 4.4 20.0 362706 305218 329041 307007 Ave 350933.990 17.0 20.0	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 M2 \$88D OR COD 563452 596737 595761 513714 Ave 571859.509 6.2 20.0 751570 792686 787469 694526 Ave 760510.780 5.3 20.0 617951 671784 682739 601502 Ave 643217.933 5.4 20.0 458250 498692 513964 454783 Ave 480568.287 5.3 20.0 54810.6 538716 560304 500903 Ave 540870.511 4.4 20.0 362706 305218 329041 307007 Ave 350933.990 17.0 20.0	LVL 1 LVL 2 LVL 3 LVL 4 TYPE B M1 M2 %RSD OR COD 563452 596737 595761 513714 Ave 571859.509 6.2 20.0 - .751570 792686 787469 694526 Ave 760510.780 5.3 20.0 - .617951 671784 682739 601502 Ave 643217.933 5.4 20.0 - 459250 498692 513964 454783 Ave 480568.287 5.3 20.0 - 548106 538716 560304 509903 Ave 540870.511 4.4 20.0 - 362706 305218 329041 307007 Ave 350933.990 17.0 20.0 -

Note: The ml coefficient is the same as Ave CF for an Ave curve type.

FORM VI 8015B

Page 118 of 186

02/21/2012

DIM0200236

DIM0200278

FORM VI GC VOA INITIAL CALIBRATION DATA EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name:	TestAmerica Bu	ffalo		Job	No.: 4	80-15570-1			Ar	aly Batc	h No.: 4	9964	
SDG No.:													
Instrument	ID: PE-01			GC	Column:	ZB-5	ID: 0.25	o (mm)	He	ated Pur	ge: (Y/N)	N	
Calibratio	n Start Date:	02/01/2012	10:57	Ca]	ibratio	n End Date:	02/01/201	2 12:06	Çá	alibratio	n ID: 58	52	
Calibration F	Tiles:												
LEVEL: Level 1 Level 2 Level 3 Level 4	LAB SAMPLE ID: STD 480-49964/5 STD 480-49964/6 STD 480-49964/7 STD 480-49964/8		LAB FILE PE08205. PE08206. PE08207. PE08208.	d d									·u
	ANALYTE		CURVE		RESPONSE			CONCENTRATION (NG/UL)					
			TYPE	LVL 1	LVL 2	LVL 3	LVL 4		LVL 1	LVL 2	LVL 3	LVL 4	**************************************
2-Methoxyeth	anol		Ave	5634515	119347	35 23830431	25685716	TI I	10.0	20.0	40.0	50.0	
2-Ethoxyetha	inel	H. S.	Ave	7515699	158537	13 31498762	34726285		10.0	20.0	40.0	50.0	
Propylene gl	ycol		Ave	6179509	134356	83 2730956	30,075,112		10.0	20.0	40.0	50.0	
Ethylene gly	/col		Ave	4592495	99738	49 2055855	22739168	į.	10.0	20.0	40.0	50.0	
Diethylene g	lycel		Ave	5481057	107743				10.0	20.0	40.0	50.0	4
Triethylene			Ave	3627055	61043				10.0	20.0	40.0	50.0	
1,4-Sutanedi	.ol		Ave	36530103	488561	22 5802347	68266023		40.0	50.0	60.0	80.0	

Curve '	Type Legend:	
Ave =	Average	

02/21/2012

DIM0200236

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Instrument ID: PE-01	Start Date: 02/02/2012 07:53
Analysis Batch Number: 50111	End Date: 02/02/2012 20:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION	LAB FILE ID	COLUMN ID
CCV 480-50111/2	The second secon	02/02/2012 07:53	1 1	PE08226.d	ZB-5 0.25(mm)
MB 480-50118/1-A		02/02/2012 08:46	1	PE08227.d	ZB-5 0.25(mm)
LCS 480-50118/2-A		02/02/2012 10:25	1	PE08228.d	ZB-5 0.25 (mm)
480-15570-1	нw02	02/02/2012 10:42	1	PE08229.d	ZB-5 0.25 (mm)
480-15570-2	EB01	02/02/2012 11:00	1	PE08230.d	ZB-5 0.25(mm)
480-15570-3	FB02	02/02/2012 11:17	1	PE08231.d	2B-5 0.25(mm)
CCV 480-50111/8		02/02/2012 11:34	1	PE08232.d	2B-5 0.25(mm)
480-15570-4	FB03	02/02/2012 12:08	1 1	PE08233.d	ZB-5 0.25(mm)
480-15570-5	FB04	02/02/2012 12:25	1	PE08234.d	ZB-5 0.25(mm)
480-15570-6	FB05	02/02/2012 12:43	1	PE08235.d	2B-5 0.25(mm)
480-15570-7	FB06	02/02/2012 13:00	1	PE08236.d	ZB-5 0.25(mm)
480-15570-8	HW01	02/02/2012 13:17	1	PE08237.d	ZB-5 0.25(mm)
480-15570-9	HW02Z	02/02/2012 13:35	1	PE08238.d	ZB-5 0.25(mm)
480-15570-10	HW04	02/02/2012 13:52	1	PE08239.d	ZB-5 0.25(mm)
480-15570-1 MS	HW02 MS	02/02/2012 14:09	1	PE08240.d	ZB-5 0.25 (mm)
480-15570-1 MSD	HW02 MSD	02/02/2012 14:26	1	PE08241.d	ZB-5 0.25(mm)
CCV 480-50111/18		02/02/2012 14:44	1	PE08242.d	ZB-5 0.25(mm)
ZZZZZ		02/02/2012 15:35	1		ZB-5 0.25(mm)
MB 480-50122/1-A		02/02/2012 16:10	1	PE08245.d	ZB-5 0.25(mm)
LCS 480-50122/2-A		02/02/2012 16:27	1	PE08246.d	ZB-5 0.25(mm)
480-15570-11	HW05	02/02/2012 16:44	1	PE08247.d	2B-5 0.25(mm)
480-15570-12	HW06:	02/02/2012 17:02	1	PE08248.d	ZB-5 0.25(mm)
CCV 480-50111/25	C. 400.000 (1.70	02/02/2012 17:19	1	PE08249.d	ZB-5 0.25(mm)
480-15570-13	н Авожн	02/02/2012 17:36	.1	PE08250.d	ZB-5 0.25(mm)
480-15570-14	HW12	02/02/2012 17:53	1	PE08251.d	ZB-5 0.25(mm)
480-15570-15	HW13	02/02/2012 18:11	1	PE08252.d	ZB-5 0.25(mm)
480-15570-16	HW14	02/02/2012 18:28	1	PE08253.d	ZB-5 0.25(mm)
480-15570-17	HW14-P	02/02/2012 18:45	1	PE08254.d	ZB-5 0.25 (mm)
480-15570-18	HW17	02/02/2012 19:03	1	PE08255.d	ZB-5 0.25 (mm)
480-15570-19	HW24	02/02/2012 19:20	1	PE08256.d	ZB-5 0.25(mm)
480-15570-20	HW24-P	02/02/2012 19:37	1	PE08257.d	ZB-5 0.25(mm)
480-15570-11 MS	HW05 MS	02/02/2012 19:54	1	PE08258.d	28-5 0.25 (mm)
480-15570-11 MSD	HW05 MSD	02/02/2012 20:12	L 1 -	PE08259.d	ZB-5 0.25 (mm)
CCV 480-50111/36	to the property of the propert	02/02/2012 20:29	f	PE08260.d	ZB-5 0.25(mm)

8015B

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	₹D	MAX %D
2-Methoxyethanol	Ave	571860	580610		20.3	20.0	1.5	20.0
2-Ethoxyethanol	Ave	760511	771229		20.3	20.0	1.4	20.0
Propylene glycol	Ave	643218	642094		20.0	20.0	-0.2	20.0
Ethylene glycol	Ave	480568	476585		19.8	20.0	-0.8	20.0
Diethylene glycol	Ave	540871	517064		19.1	20.0	-4.4	20.0
Triethylene Glycol	Ave	350934	385273		22.0	20.0	9.8	20.0
1,4-Butanediol	Ave	917742	941083	01	51.3	50.0	2.5	20.0

Lab Name: TestAmerica Buffalo Job No.: 480-15570-1

SDG No.:

Lab Sample ID: CCV 480-50111/8 Calibration Date: 02/02/2012 11:34

Instrument ID: PE-01 Calib Start Date: 02/01/2012 10:57

GC Column: ZB-5 ID: 0.25(mm) Calib End Date: 02/01/2012 12:06

Lab File ID: PE08232.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methoxyethanol	Ave	571860	550104		19.2	20.0	-3.8	20.0
2-Ethoxyethanol	Ave	760511	734949		19.3	20.0	-3.4	20.0
Propylene glycol	Ave	643218	613890		19.1	20.0	-4.6	20.0
Ethylene glycol	Ave	480568	454437		18.9	20.0	-5.4	20.0
Diethylene glycol	Ave	540871	501207		18.5	20.0	-7.3	20.0
Triethylene Glycol	Ave	350934	302082		17.2	20.0	-13.9	20.0
1,4-Butanediol	Ave	917742	897006		48.9	- 50.0	-2.3	20.0

 Lab Name:
 TestAmerica Buffalo
 Job No.: 480-15570-1

 SDG No.:
 Lab Sample ID: CCV 480-50111/18
 Calibration Date: 02/02/2012 14:44

 Instrument ID: PE-01
 Calib Start Date: 02/01/2012 10:57

GC Column: ZB-5 ID: 0.25(mm) Calib End Date: 02/01/2012 12:06

Lab File ID: PE08242.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methoxyethanol	Ave	571860	553176	1. 7.	19.3	20.0	-3.3	20.0
2-Ethoxyethanol	Ave	760511	739166	and the second s	19,4	20.0	-2.8	20.0
Propylene glycol	Ave	643218	614796		19.1	20.0	-4,4	20.0
Ethylene glycol	Ave	480568	458121	N	19.1	20.0	-4.7	20.0
Diethylene glycol	Ave	540871	508707		18.8	20.0	-5.9	20.0
Triethylene Glycol	Ave	350934	312423	eren American III. Village II.	17.8	20.0	-11.0	20.0
1,4-Butanediol	Ave	917742	900289		49.0	50.0	-1.9	20.0

Lab Name: TestAmerica Buffalo Job No.: 480-15570-1

SDG No.:

Lab Sample ID: CCV 480-50111/25 Calibration Date: 02/02/2012 17:19

Instrument ID: PE-01 Calib Start Date: 02/01/2012 10:57

GC Column: ZB-5 ID: 0.25(mm) Calib End Date: 02/01/2012 12:06

Lab File ID: PE08249.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methoxyethanol	Ave	571860	682915		23.9	20.0	19.4	20.0
2-Ethoxyethanol	Ave	760511	893401		23.5	20.0	17.5	20.0
Propylene glycol	Ave	643218	767609	× ×	23,9	20.0	19.3	20.0
Ethylene glycol	Ave	480568	574719	- 	23.9	20.0	19.6	20.0
Diethylene glycol	Ave	540871	630354		23.3	20.0	16.5	20.0
Triethylene Glycol	Ave	350934	368811		21.0	20.0	5.1	20.0
1,4-Butanediol	Ave	917742	945545		51.5	50.0	3.0	20.0

 Lab Name:
 TestAmerica Buffalo
 Job No.:
 480~15570~1

 SDG No.:
 Lab Sample ID:
 CCV 480~50111/36
 Calibration Date:
 02/02/2012 20:29

Instrument ID: PE-01 Calib Start Date: 02/01/2012 10:57

GC Column: ZB-5 ID: 0.25(mm) Calib End Date: 02/01/2012 12:06

Lab File ID: PE08260.d Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC	SPIKE AMOUNT	%D	MAX %D
2-Methoxyethanol	Ave	571860	752335		26.3	20.0	31.6	20.0
2-Ethoxyethanol	Ave	760511	1011859	***************************************	26.6	20.0	33.0*	20.0
Propylene glycol	Ave	643218	854527		26,5	20.0	32.9*	20.0
Ethylene glycol	Ave	480568	642211	**************************************	26.7	20.0	33.6*	20.0
Diethylene glycol	Ave	540871	702019	· · · · · · · · · · · · · · · · · · ·	26.0	20.0	29.8+	20.0
Triethylene Glycol	Ave	350934	425562		24.3	20.0	21.37	20.0
1,4-Butanediol	Ave	917742	1050394		57.2	50.0	14.5	20.0

FORM III GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name				Job No.: 480	-15570-1
SDG No.:	***				
Matrix:	Water	Level:	Low	Lab File ID:	PE08228.d
Lab ID:	LCS 480-50118/2-A			Client ID:	

* .	SPIKE	LCS	LCS	QC	
	ADDED	CONCENTRATION	8	LIMITS	#
COMPOUND	(mg/L)	(mg/L)	REC	REC	
Ethylene glycol	20.0	16.2	81	62-148	
Triethylene Glycol	20.0	16.0	80	10-169	, ,
Diethylene glycol	20.0	15.6	78	61-150	
2-Methoxyethanol	20.0	18.4	92	75-121	
2-Ethoxyethanol	20.0	18.6	93	72-122	

 $\mbox{\#}$ Column to be used to flag recovery and RPD values FORM III 8015B

02/21/2012

Lab Name: T	estAmerica Buffalo	Job No.: 480-15570-1							
SDG No.:									
Client Sampl	e ID:	Lab Sample ID: LCS 480-50118/2-A							
Matrix: Wat	er	Lab File ID: PE08228.d							
Analysis Met	hod: 8015B	Date Collected:							
Sample wt/vo	ol: 0.5(mL)	Date Analyzed: 02/02/2012 10:25							
Soil Aliquot	: Vol:	Dilution Factor: 1							
Soil Extract	. Vol.:	GC Column: 2B-5 ID: 0.25(mm)							
% Moisture:		Level: (low/med) Low							
Analysis Bat	ch No.: 50111	Units: mg/L							
CAS NO.	COMPOUND NAME	RESULT Q RL MDL							
107-21-1	Ethylene glycol	16.2 10 0.7							
112-27-6	Triethylene Glycol	16.0 10 1.							
111-46-6	Diethylene glycol	15.6 10 0.5							
109-86-4	2-Methoxyethanol	18.4 10 0.7							
110-80-5	2-Ethoxyethanol	18.6							
CAS NO.	SURROGATE	%REC Q LIMITS							
110-63-4	1.4-Butanediol	93 66-130							

FORM III GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name	: TestAmerica Buffal		normanna and an annual and an an annual	Job	No.:	480-	-15570-1
SDG No.:			,				
Matrix:	Water	Level:	Low	Lab	File	ID:	PE08246.d
Lab ID:	LCS 480-50122/2-A			Clie	nt II):	

	SPIKE ADDED	LCS CONCENTRATION	LCS %	QC LIMITS	#
COMPOUND	(mg/L)	(mg/L)	REC	REC	
Ethylene glycol	20.0	18.0	90	62-148	
Triethylene Glycol	20.0	14,8	74	10-169	
Diethylene glycol	20.0	17.8	89	61-150	
2-Methoxyethanol	20.0	18.9	95	75-121	and the same of th
2-Ethoxyethanol	20.0	18.7	94	72-122	

Column to be used to flag recovery and RPD values FORM III 8015B

02/21/2012

Lab Name: TestAmerica Buffalo		Job No.: 480-15570-1								
SDG No.:										
Client Sample	e ID:	Lab Sample ID: LCS 480-50122/2-A								
Matrix: Water Analysis Method: 8015B Sample wt/vol: 0.5(mL) Soil Aliquot Vol: Soil Extract Vol.:		Lab File ID: PE08246.d								
		Date Collected: Date Analyzed: 02/02/2012 16:27								
		GC Column: ZB-5 ID: 0.25(mm)								
		% Moisture:		Level: (low/med) Low						
Analysis Bato	ch No.: 50111	Units: mg/L								
CAS NO.	COMPOUND NAME	RESULT Q RL MDL								
107-21-1	Ethylene glycol	18.0 10 0.7								
112-27-6	Triethylene Glycol	14.8 10 1.								
111-46-6	Diethylene glycol	17.8 10 0.5								
109-86-4	2-Methoxyethanol	18.9 10 0.7								
110-80-5	2-Ethoxyethanol	18.7 10 0.9								

%REC

97

Q

LIMITS

66-130

SURROGATE

CAS NO.

1,4-Butanediol

110-63-4

FORM III GC VOA MATRIX SPIKE RECOVERY

Lab Name	: TestAmerica Buffa		-	Job			15570-1	~~~		
SDG No.:		energios de necessor en constante de la consta							***************************************	
Matrix:	Water	Level:	Low	Lab	File	ID:	PE08240.d		<i>f</i>	
Lab ID:	480-15570-1 MS			Clie	nt ID	: HW	102 MS			

	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %	QC LIMITS	#
COMPOUND	(mg/L)	(mg/L)	(mg/L)	REC	REC	
Ethylene glycol	20.0	ND	18.1	90	50-150	
Triethylene Glycol	20.0	ND	15.3	76	50-150	
Diethylene glycol	20.0	0.64 J	17.8	86	50-150	denomination repeny, we repos
2-Methoxyethanol	20.0	ND	18.6	93	50-150	
2-Ethoxyethanol	20.0	ND	18.7	94	50-150	****

 $\mbox{\#}$ Column to be used to flag recovery and RPD values FORM III 8015B

02/21/2012

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1
SDG No.:	
Client Sample ID: HW02 MS	Lab Sample ID: 480-15570-1 MS
Matrix: Water	Lab File ID: PE08240.d
Analysis Method: 8015B	Date Collected: 01/25/2012 12:58
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 14:09
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Ü	RL	MDL
107-21-1	Ethylene glycol	18.1	7	10	0.76
112-27-6	Triethylene Glycol	15.3	- Annual Section 1997 As	10	1.6
111-46-6	Diethylene glycol	17.8	-	10	0.51
109-86-4	2-Methoxyethanol	18.6	, , , , , , , , , , , , , , , , , , , ,	10	0.76
110-80-5	2-Ethoxyethanol	18.7		10	0.94

CAS NO.	SURROGATE .	%REC	Q	LIMITS
110-63-4		99		

FORM III GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name	e: TestAmerica Buffa			Job	No.:	480	-15570-1	
SDG No.:	parameter see a grant and a gr	and the control of th	ett och til state skalade och som skalade och som skalade och skalade och skalade och skalade och skalade och s					
Matrix:	Water	Level:	Low	Lab	File	ID:	PE08241.d	energenistrik jeller skila och
Lab ID:	480-15570-1 MSD			Clie	ent ID	: Н	WO2 MSD	

	SPIKE	MSD CONCENTRATION	MSD %	8	QC L	IMITS	#
COMPOUND	(mg/L)	(mg/L)	REC	RPD	RPD	REC	"
Ethylene glycol	20.0	18.1	91	0	50	50-150	
Triethylene Glycol	20.0	17.7	88	14	50	50-150	
Diethylene glycol	20.0	18.1	87	2	50	50-150	·
2-Methoxyethanol	20.0	18.4	92	1	50	50-150	
2-Ethoxyethanol	20.0	18.5	93	1	50	50-150	

Column to be used to flag recovery and RPD values FORM III 80158

Lab Name: TestAmerica Buffalo	'Job No.: 480-15570-1
SDG No.:	
Client Sample ID: HW02 MSD	Lab Sample ID: 480-15570-1 MSD
Matrix: Water	Lab File ID: PE08241.d
Analysis Method: 8015B	Date Collected: 01/25/2012 12:58
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 14:26
Soil Aliquot Vol:	Dilution Factor: 1
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)
% Moisture:	Level: (low/med) Low
Analysis Batch No.: 50111	Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
107-21-1	Ethylene glycol	18.1		10	0.76
112-27-6	Triethylene Glycol	17.7		10	1.6
111-46-6	Diethylene glycol	18.1		10	0.51
109-86-4	2-Methoxyethanol	18.4		10	0.76
110-80-5	2-Ethoxyethanol	18.5		10	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
110-63-4	1,4-Butanediol	101		66-130

FORM III GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Buffalo Job No.: 480-15570-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PE08258.d

Lab ID: 480-15570-11 MS Client ID: HW05 MS

***************************************	SPIKE	SAMPLE	MS	MS	ос	
	ADDED	1	CONCENTRATION	95	LIMITS	#
COMPOUND	(mg/L)	(mg/L)	(mg/L)	REC	REC	
Ethylene glycol	20.0	ND	18.3	92	50-150	processor and the second secon
Triethylene Glycol	20.0	2.2 J	15.6	67	50-150	
Diethylene glycol	20,0	0.68 J	18.6	90	50-150	
2-Methoxyethanol	20.0	ND	19.0	95	50-150	Mary Transfer and American
2-Ethoxyethanol	20.0	ND	19.2	96	50-150	

Column to be used to flag recovery and RPD values FORM III 8015B

02/21/2012

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1				
SDG No.:					
Client Sample ID: HW05 MS	Lab Sample ID: 480-15570-11 MS				
Matrix: Water	Lab File ID: PE08258.d				
Analysis Method: 8015B	Date Collected: 01/26/2012 11:35				
Sample wt/vol: 0.5(mL)	Date Analyzed: 02/02/2012 19:54				
Soil Aliquot Vol:	Dilution Factor: 1				
Soil Extract Vol.:	GC Column: ZB-5 ID: 0.25(mm)				
% Moisture:	Level: (low/med) Low				
Analysis Batch No.: 50111	Units: mg/L				

CAS NO.	COMPOUND NAME	COMPOUND NAME RESULT		RL	MDL
107-21-1	Ethylene glycol	18.3		10	0,76
112-27-6	Triethylene Glycol	15.6		10	1.6
111-46-6	Diethylene glycol	18.6	***************************************	10	0.51
109-86-4	2-Methoxyethanol	19.0		10	0.76
110-80-5	2-Ethoxyethanol	19.2		10	0.94

			r	بالتناء ويستعلق البراء والناطيخ ويوسيجه
CAS NO.	SURROGATE	%REC	Q	LIMITS
		<u></u>	L	Ĺ
110-63-4	1,4-Butanediol	103		66-130

FORM III GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Buffalo Job No.: 480-15570-1

SDG No.;

Matrix: Water Level: Low Lab File ID: PE08259.d

Lab ID: 480-15570-11 MSD Client ID: HW05 MSD

# #	SPIKE ADDED	MSD CONCENTRATION	MSD %	8	QC LIMITS		#
COMPOUND	(mg/L)	(mg/L)	REC	RPD	RPD	REC	
Ethylene glycol	20.0	20.2	101	10	50	50-150	
Triethylene Glycol	20.0	19.0	84	19	50	50-150	
Diethylene glycol	20.0	21.4	104	14	50	50-150	
2-Methoxyethanol	20.0	20.6	103	8	50	50-150	(((((((((((((((((((
2-Ethoxyethanol	20.0	21.4	107	11	50	50-150	

Column to be used to flag recovery and RPD values FORM III 8015B

02/21/2012

Lab Name:	TestAmerica Buffalo	Job No.: 480-155	70-1						
SDG No.:		and the second s							
Client Samp	le ID: HW05 MSD	Lab Sample ID: 4	80-15570-	-11 MSD					
Matrix: Wat	ter	Lab File ID: PEO	8259.d						
Analysis Me	thod: 8015B	Date Collected:	01/26/201	L2 11:35	Age Age of Angles				
Sample wt/v	ol: 0.5(mL)	Date Analyzed: 0	2/02/2012	20:12					
Soil Aliquo	t Vol:	Dilution Factor:	Dilution Factor: 1						
Soil Extrac	t Vol.:	GC Column: ZB-5 ID: 0.25(mm)							
% Moisture:		Level: (low/med) Low							
Analysis Batch No.: 50111		Units: mg/L							
CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL				
107-21-1	Ethylene glycol	20.2		1,0	0.76				
112-27-6	Triethylene Glycol	19.0		10	1.6				
111-46-6	Diethylene glycol	21.4		10	0,51				
109-86-4	2-Methoxyethanol	20.6	amaryakan nyaritika darira yirangi aktapan danamayir 🖟 amandan	10	0.76				
110-80-5	2-Ethoxyethanol	21,4		10	0.94				
CAS NO	SUBBOCATE	•	9.DF/	0. [TITMTTIC				

110-63-4

1,4-Butanediol

FORM II GC VOA SURROGATE RECOVERY

Lab	Name	: TestAmerica Buffalo	Job	No.:	480-15570-1
SDG	No.:	-			
Matr	ixt	Water	Leve	el: I	ow

GC Column (1): ZB-5 ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	14BD1 #
HW02	480-15570-1	106
EB01	480-15570-2	106
FB02	480-15570-3	103
FB03	480-15570-4	104
FB04	480-15570-5	106
FB05	480-15570-6	108
FB06	480-15570-7	105
HWO1	480-15570-8	103
HW02Z	480-15570-9	100
HWO4	480-15570-10	99
HW05	480-15570-11	102
HW06	480-15570-12	105
HW08A	480-15570-13	101
HW12	480-15570-14	100
HW13	480-15570-15	100
HW14	480-15570-16	103
HW14-P	480-15570-17	102
HW17	480-15570-18	102
HW24	480-15570-19	99
HW24-P	480-15570-20	101
*	MB 480-50118/1-A	101
and delicate to be the second	MB 480-50122/1-A	92
marke delikanon mendilikanon mendiliminjanda das me pasabaha dalam keland	LCS 480-50118/2-A	93
4844-1998-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	LCS 480-50122/2-A	97
HW02 MS	480-15570-1 MS	99
HW05 MS	480-15570-11 MS	103
HWQ2 MSD .	480-15570-1 MSD	101
HW05 MSD	480-15570-11 MSD	109

14BD = 1,4-Butanediol

QC LIMITS

Column to be used to flag recovery values

FORM II 8015B

Page 48 of 186

02/21/2012

GC VOA BATCH WORKSHEET

DG No.:	3								
Batch Number:			Ва	atch Start Date:	02/02/12	08:45	Batch Analyst:	Dosier,	Christina
Batch Method:	8015 Prep		Ва	atch End Date:	ξ.				
Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	GLY_CCV_1000 00013	GLY_SURRIOGO 00015		3
MB 480-50118/1		8015 Prep, 8015B		0.5 mL	1 mL		50 úL		
LCS 480-50118/2		8015 Prep, 8015B		0.5 mL	1 mL	10 uL	50 uL		
480-15570-B-1	HW02	8015 Prep, 8015B	T	0.5 mL	1 mL		50 uL		
480~15570-B-1 MS	HW02	8015 Prep, 8015B	T	0.5 mL	1 mL	10 uL	50 uL		
480-15570-B-1 MSD	HW02	8015 Prep, 8015B	Ţ	0.5 mL	1 mL °	10 uL	50 uL	***************************************	
480-15570-A-2	E801	8015 Prep, 8015B	Т	0.5 mL	1 mL		50 uL	THE RESTORAGE OF THE PROPERTY	
480-15570-A-3	FB02	8015 Prep, 8015B	T	0.5 mL	1 mL		50 uL		
480-15570-A-4	FB03	8015 Prep, 80158	T	0.5 mL	1 mL		'50 uL		
480-15570-B-5	FB04	8015 Prep, 8015B	T	0.5 mL	l mL		50 uL	***************************************	
480-15570-B-6	FB05	8015 Prep, 8015B	T	0.5 mL	1 mL		50 uL	· · · · · · · · · · · · · · · · · · ·	
480-15570-A-7	FB06	8015 Prep, 8015B	т	0.5 mL	1 mL		50 uL		
480-15570-A-8	HW01	8015 Prep, 8015B	T	0.5 mL	1 mL		50 úL	· · · · · · · · · · · · · · · · · · ·	
480-15570-B-9	HW02Z	8015 Prep, 8015B	T	0.5 mL	1 mL		50 uL		
480-15570-A-10	HWO4	8015 Prep, 8015B	T	0.5 mL	1 mL		50 uL		

		Batch Notes	*
Annual Control of the			Annual Control of the
Methanol Lot Number	*	DE695	
·			

Basis	Basis	Descript	ion	
T Tota	1/NA			

8015B

Page 179 of 186

Page 1 of 1 02/21/2012

DIM0200236

DIM0200299

GC VOA BATCH WORKSHEET

7						AAI	and the same of th		
Batch Number:	50122		. В	atch Start Date:	02/02/12	09:09	Batch Analyst:	Dosier, (Christina
Batch Method:	8015 Prep		В.	atch End Date:		AMAZON A WAXAA			
Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	GLY_CCV_1000 00013	GLY_SURR1000 00015		
MB 480-50122/1		8015 Prep. 8015B		0.5 mL	1 mL		50 ùL		
LCS 480-50122/2		8015 Prep, 8015B		0.5 mL	1 mL	10 uL	50 uL		
480-15570-B-11	нw05 .	8015 Prep, 80158	T	0.5 mL	1 mL		50 uL		
480-15570-B-11 MS	HW05	8015 Prep, 8015B	T	0.5 mL	1 mL	10 uL	50 UL		
480-15570-B-11 MSD	BW05	8015 Prep, 8015B	T	0.5 mL	1 mL	10 uL	50 uL		
480-15570-B-12	HWO6	8015 Prep, 80158	T	0.5 mL	1 mL		50 uL	The state of the s	
480-15570-A-13	HWOSA	8015 Prep, 8015B	T	0.5 mL	1 mL		50 uL		
480-15570-A-14	HW12	8015 Prep, 8015B	T:	0.5 mL	1 mL		50 uL		
480-15570-B-15	HW13	8015 Prep, 80158	T	0.5 mL	1 mL		50 uL		
480-15570-B-16	HW14	8015 Prep, 8015B	T,	0.5 mL	1 mL		50 bl		
480-15570-B-17	BW14-P	8015 Prep, 8015B	T	0.5 mL	1 mL		50 UL	- Junio	
480-15570-A-18	HW17	8015 Frep, 80158	T	0.5 mL	1 mL		50 uL		
480-15570-B-19	HW24	8015 Prep, 8015B	T	0.5 ml	1 mL		50 UL		
480-15570-A-20	HW24-₽	8015 Prep, 8015B	Ť	0.5 mL	1 mt,		50 uL		

í	Batch Notes	-
ļ	Morthand Let Mushov	
1	Methanol Lot Number DE695	1

Basis	Basis Description	
-TP	Total/NA	ì
- 1	TUCALTNA	

8015B

Page 180 of 186

Page 1 of 1 02/21/2012

DIM0200236 DIM0200300

FORM IV GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Buffalo		Job No.: 480-15570-1			
SDG No.:					
Lab Sample ID:	MB 480-50118/1-A				
Matrix: Water			Date Extracted:	02/02/2012	08:45
Lab File ID:(1) PE08227.d			Lab File ID: (2)		
Date Analyzed: (1) 02/02/2012 0	8:46	Date Analyzed: (2)	
Instrument ID: (1) PE-01	A	Instrument ID: (2).	· · · · · · · · · · · · · · · · · · ·
GC Column: (1) Z	B-5 ID	: 0.25 (mm)	GC Column: (2)		ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

		DATE	DATE	
CLIENT SAMPLE ID	LAB SAMPLE ID	ANALYZED 1	ANALYZED 2	
	LCS 480-50118/2-A	02/02/2012 10:25		
HW02	480-15570-1	02/02/2012 10:42	VOOD 111 PARK AM AMARAGAMANA AMARA A	
EB01	480-15570-2	02/02/2012 11:00	***************************************	
FB02	480-15570-3	02/02/2012 11:17	A	
FB03	480-15570-4	02/02/2012 12:08		
FB04	480-15570-5	02/02/2012 12:25	•	
FB05	480-15570-6	02/02/2012 12:43	agi na dia (han) (2.00 annia 1 .00 annia 2.00 annia	
FB06	480-15570-7	02/02/2012 13:00	the Community of the Co	
HW01	480-15570-8	02/02/2012 13:17	promotes described the second of the second	
HW02Z	480-15570-9	02/02/2012 13:35		
HWO4	480-15570-10	02/02/2012 13:52	·	
HW02 MS	480-15570-1 MS	02/02/2012 14:09	ocm coor (200) ***********************************	
HW02 MSD	480-15570-1 MSD	02/02/2012 14:26	· Annual Company	

Lab Name: 1	CestAmerica Buffalo	Job No.: 480-15570-1					
SDG No.:							
Client Samp	le ID:	Lab Sample ID:	Lab Sample ID: MB 480-50118/1-A				
Matrix: Wat	er	Lab File ID: PE08227.d					
Analysis Me	thod: 8015B	Date Collected:					
Sample wt/vo	ol: 0.5(mL)	Date Analyzed: 02/02/2012 08:46 Dilution Factor: 1					
Soil Aliquo	t Vol:						
Soil Extract	t Vol.:	GC Column: ZB-	GC Column: ZB-5 ID: 0.25(mm)				
% Moisture:		Level: (low/med) Low					
Analysis Batch No.: 50111		Units: mg/L					
CAS NO.	COMPOUND NAME	RESULT	Ć	RL	MDL		
107-21-1	Ethylene glycol	ND		10	0.76		
112-27-6	Triethylene Glycol	ND		10	1.6		
111-46-6	Diethylene glycol	ND		10	0.51		
109-86-4	2-Methoxyethanol	ND		10	0.76		
110-80-5	2-Ethoxyethanol	ND ND		10	0.94		
CAS NO.	CAS NO. SURROGATE		*REC	Q	LIMITS		
110-63-4	1,4-Butanediol	processing money entering a second part of the part of	101		66-130		

FORM IV GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Buffalo	Job No.: 480-15570-1			
SDG No.:				
Lab Sample ID: MB 480-50122/1-A	7.71.71			
Matrix: Water	Date Extracted: 02/02/2012 09:09			
Lab File ID:(1) PE08245.d	Lab File ID:(2)			
Date Analyzed: (1) 02/02/2012 16:10	Date Analyzed:(2)			
Instrument ID: (1) PE-01	Instrument ID: (2)			
GC Column: (1) ZB-5 ID: 0.25 (mm)	GC Column: (2) ID:			

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

		DATE	DATE
CLIENT SAMPLE ID	LAB SAMPLE ID	ANALYZED 1	ANALYZED 2
	LCS 480-50122/2-A	02/02/2012 16:27	
HW05	480-15570-11	02/02/2012 16:44	7. 32.494.000, 000, 000, 000, 000, 000, 000, 000
HW06	480-15570-12	02/02/2012 17:02	
HW08A	480-15570-13	02/02/2012 17:36	The second secon
HW12	480-15570-14	02/02/2012 17:53	Control of the contro
HW13	480-15570-15 :	02/02/2012 18:11	ommonogramagyana mananagamananananananananananananan managy fasi lapana 6 o oli i gegip ke, kee, ee, ee, ee, ee
HW14	480-15570-16	02/02/2012 18:28	ogs (prime) i menne prime menne prime p
HW14-P	480-15570-17	02/02/2012 18:45	A CONTRACTOR OF THE PROPERTY O
HW17	480-15570-18	02/02/2012 19:03	Agricultural de general proposition de commercial de la commercial de co
HW24	480-15570-19	02/02/2012 19:20	and the second s
HW24-P	480-15570-20	02/02/2012 19:37	The state of the s
HW05 MS	480-15570-11 MS	02/02/2012 19:54	The man appropriate the second
HW05 MSD	480-15570-11 MSD	02/02/2012 20:12	page and a

Lab Name: I	estAmerica Buffalo	Job No.: 480-15570-1					
SDG No.:	,						
Client Sampl	le ID:	Lab Sample ID: MB 480-50122/1-A					
Matrix: Wat	er	Lab File ID: PE08245.d					
Analysis Met	hod: 8015B	Date Collected:					
Sample wt/vo	ol: 0.5(mL)	Date Analyzed: 02/02/2012 16:10					
Soil Aliquot	Vol:	Dilution Factor: 1					
Soil Extract	Vol.s	GC Column: ZB-5 ID: 0.25(mm)					
% Moisture:		Level: (low/med) Low					
Analysis Bat	tch No.: 50111	Units: mg/L					
CAS NO.	COMPOUND NAME	RESULT Q RL MDL					
107-21-1	Ethylene glycol	ND 10 0.76					
112-27-6	Triethylene Glycol	ND 10 1.6					
111-46-6	Diethylene glycol	ND 10 0.51					
109-86-4	2-Methoxyethanol	ND 10 0.76					
110-80-5	2-Ethoxyethanol	ND 10 0.94					
CAS NO.	SURROGATE	%REC Q LIMITS					

110-63-4

1,4-Butanediol

66-130

92